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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,252	12/01/2003	Arthur E. Sheiman	42339-198343	1610
26694	7590	08/06/2007		
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			EXAMINER HUANG, WEN WU	
			ART UNIT 2618	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/724,252

Applicant(s)

SHEIMAN, ARTHUR E.

Examiner

Wen W. Huang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-10 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-10 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-3, 5-10 and 12-19 are pending.

Claims 4 and 11 are canceled.

Claim Objections

Claim 17 is objected to because of the following informalities:

Claim 17 is currently amended to include new limitation, "through a first leakage path and a second leakage path". However, claim 17 is incorrectly labeled as (*Original*). Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5-10 and 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US. 5,442,811; hereinafter "Kobayashi") in view of Smith (US. 5,444,864).

Regarding **claim 1**, Kobayashi teaches an apparatus, comprising: a transmit/receive switch (see Kobayashi, fig. 8, component 4) adapted to leak sufficient

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energy to a receiver during transmission (see Kobayashi, col. 14, lines 45-52) such that the receiver is able to correctly demodulate a transmitted signal (see Kobayashi, col. 14, lines 9-12) wherein the transmit/receive switch comprises a first leakage path between said transmit output and said receive input (see Kobayashi, fig. 24, dashed line, col. 18, lines 31-38).

Kobayashi is silent to teaching that wherein the transmit/receive switch comprises a second leakage path between said transmit output and said receive input. However, the claimed limitation is well known in the art as evidenced by Smith.

In the same field of endeavor, Smith teaches an transmit/receive switch comprising a first second leakage path between said transmit output and said receive input (see Smith, fig. 1, leakage 27 $e'(t)$, col. 2, lines 30-35) and a second leakage path between said transmit output and said receive input (see Smith, fig. 1, leakage 30, col. 2, lines 41-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Kobayashi with the teaching of Smith in order to adjust the loop signal the same level as that of the receiving signal (see Kobayashi, col. 12, lines 28-29). The second leakage path of Smith allows the transmit/receive switch leaks energy low enough to not overload the receiver. Thus, one ordinary artisan would implement the second leakage path of Smith to the transmit/receive switch of Kobayashi.

Regarding **claim 2**, the combination of Kobayashi and Smith also teaches the apparatus according to claim 1, wherein the transmit/receive switch is further adapted to prevent an amount of energy leaked to said receiver from being sufficient to overload the receiver (see Smith, col. 1, lines 48-52).

Regarding **claim 3**, the combination of Kobayashi and Smith also teaches the apparatus according to claim 1, wherein the transmit/receive switch comprises: a switch selectively coupled to a transmit output and a receive input (see Kobayashi, fig. 9, components 4 and 68; col. 14, lines 45-52), said switch comprising a parasitic impedance between said transmit output and said receive input (see Kobayashi, fig. 10 and 11; col. 14, line 65 – col. 15, line 6).

Regarding **claim 5**, the combination of Kobayashi and Smith also teaches the apparatus according to claim 4, wherein said second leakage path comprises an impedance (see Smith, col. 4, lines 56-59).

Regarding **claim 6**, the combination of Kobayashi and Smith also teaches the apparatus according to claim 3, wherein said switch comprises at least one of a manual switch, an electromechanical relay, a transistor switch, and a PIN diode (see Kobayashi, fig. 10 and 11; col. 14, line 65 – col. 15, line 6).

Regarding **claim 7**, Kobayashi teaches a system (see Kobayashi, fig. 8), comprising:

- a transmitter (see Kobayashi, fig. 8, components 100 and 1);
- a receiver (see Kobayashi, fig. 8, components 100 and 5); and
- a transmit/receive switch (see Kobayashi, fig. 8, component 4), coupled to said transmitter and to said receiver and adapted to leak sufficient energy to said receiver during transmission by said transmitter (see Kobayashi, col. 14, lines 45-52) such that said receiver is able to correctly demodulate a signal transmitted by said transmitter (see Kobayashi, col. 14, lines 9-12) wherein the transmit/receive switch comprises a first leakage path between said transmit output and said receive input (see Kobayashi, fig. 24, dashed line, col. 18, lines 31-38).

Kobayashi is silent to teaching that wherein the transmit/receive switch comprises a second leakage path between said transmit output and said receive input. However, the claimed limitation is well known in the art as evidenced by Smith.

In the same field of endeavor, Smith teaches an transmit/receive switch comprising a first second leakage path between said transmit output and said receive input (see Smith, fig. 1, leakage 27 $e'(t)$, col. 2, lines 30-35) and a second leakage path between said transmit output and said receive input (see Smith, fig. 1, leakage 30, col. 2, lines 41-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Kobayashi with the teaching of Smith in order to adjust the loop signal the same level as that of the receiving signal

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(see Kobayashi, col. 12, lines 28-29). The second leakage path of Smith allows the transmit/receive switch leaks energy low enough to not overload the receiver. Thus, one ordinary artisan would implement the second leakage path of Smith to the transmit/receive switch of Kobayashi.

Regarding **claims 8, 10, 12 and 14**, the dependent claims are interpreted and rejected for the same reasons as set forth above in claims 2, 3, 5 and 6, respectively above.

Regarding **claim 9**, the combination of Kobayashi and Smith also teaches the system according to claim 7, further comprising: an antenna used by both said transmitter and said receiver and coupled to said transmit/receive switch (see Kobayashi, fig. 8, component 203).

Regarding **claim 13**, the combination of Kobayashi and Smith also teaches the system according to claim 12, wherein said impedance is greater than an input impedance of said receiver (see Smith, col. 4, lines 56-59).

Regarding **claim 15**, the combination of Kobayashi and Smith also teaches the system according to claim 7, wherein a signal demodulated by said receiver during transmission by said transmitter is fed back to said transmitter (see Kobayashi; col. 14, lines 9-12).

Regarding **claim 16**, the combination of Kobayashi and Smith also teaches the system according to claim 15, wherein said transmitter is adapted to use said signal demodulated by said receiver during transmission by said transmitter to perform at least one of linearization and self-diagnostics (see Kobayashi, col. 3, lines 42-45; col. 9, lines 42-45).

Regarding **claim 17**, Kobayashi teaches a method, comprising: providing a transmit/receive switch (see Kobayashi, fig. 8, component 4) adapted to leak sufficient energy through a first leakage path (see Kobayashi, fig. 24, dashed line, col. 18, lines 31-38) to a receiver during transmission (see Kobayashi, col. 14, lines 45-52) such that the receiver is able to correctly demodulate a transmitted signal (see Kobayashi, col. 14, lines 9-12).

Kobayashi is silent to teaching that wherein the transmit/receive switch adopted to leak sufficient energy through a first leakage path and a second leakage path. However, the claimed limitation is well known in the art as evidenced by Smith.

In the same field of endeavor, Smith teaches an transmit/receive switch adopted to leak sufficient energy through a first leakage path (see Smith, fig. 1, leakage 27 e'(t), col. 2, lines 30-35) and a second leakage path (see Smith, fig. 1, leakage 30, col. 2, lines 41-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Kobayashi with the teaching

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of Smith in order to adjust the loop signal the same level as that of the receiving signal (see Kobayashi, col. 12, lines 28-29). The second leakage path of Smith allows the transmit/receive switch leaks energy low enough to not overload the receiver. Thus, one ordinary artisan would implement the second leakage path of Smith to the transmit/receive switch of Kobayashi.

Regarding **claim 18**, the dependent claim is interpreted and rejected for the same reason as set forth above in claim 2.

Regarding **claim 19**, the combination of Kobayashi and Smith also teaches the method according to claim 17, further comprising: providing a transmitter adapted to be coupled to said transmit/receive switch (see Kobayashi, fig. 8, components 100 and 1); and providing a receiver adapted to be coupled to said transmit/receive switch (see Kobayashi, fig. 8, components 100 and 5).

Response to Arguments

Applicant's arguments with respect to claims 1, 7 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ho et al. (US. 6,067,448) teach an antenna switch with isolation.

Kasperkovitz (US. 7,072,614 B1) teaches an antenna switch with reduction of leakage energy.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen W. Huang whose telephone number is (571) 272-7852. The examiner can normally be reached on 10am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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7/31/07


MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER